

# meanderings

## *The Newsletter of the New Hampshire Rivers Management and Protection Program*



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Spring 2004

## From the Bend in the River

*Comments from the Rivers Coordinator*

*by Steve Couture, DES Watershed  
Management Bureau*

**T**he Rivers Management and Protection Program (RMPP) was quite active in 2003. From hosting the River and Watershed Conference with the New Hampshire Rivers Council (NHRC), to facilitating the funding of management plan related efforts for the Isinglass, Lower Merrimack, and Piscataquog River Local Advisory Committees (LAC), to participating in a legislative study commission, to developing a road sign memorandum of agreement (MOA) with N.H.

Department of Transportation (DOT), DES continues to implement the vision of RSA 483.



*A partnership with DOT in 2003 will lead to the installation of Protected River Signs at state road bridge crossings.*

DES in Concord. One hundred twenty seven watershed stewards, including local advisory committee members, lake and river associations and municipal



*New to the 2003 Exeter River Alewife Festival was a colorful canoe and kayak race along a four-mile course set in the tidal Squamscott River. See page 7 for more on the Exeter River LAC. Photo by Camilla Lockwood, ERLAC.*

## Instream Flow Pilot Projects Set to Begin This Year!

*by C. Wayne Ives, DES Watershed  
Management Bureau*

**I**n September 2003, the state Legislature made a firm and financial commitment to the protection of New Hampshire rivers. The state budget included \$355,000 to fund the Instream Flow Program. With this funding, DES was able to start the first Protected Instream Flow (PISF) Pilot Program on the Souhegan River. With federal funding received in the spring, the second PISF Pilot Program is beginning on the Lamprey River.

Both pilot programs require public and technical input. Before a PISF Program can begin on a river, DES must convene a water management planning area advisory committee (WMPAAC) and a technical review

committee (TRC). The WMPAAC is made up of people representing the knowledge and interests within the watershed. Their role is to advise and assist DES regarding public concerns and river conditions. The TRC is made up of water and watershed management professional from business, conservation, and government agencies. DES has assembled the two Souhegan River advisory committees. The technical review committee convened in February, elected officers, and studied its role in the Souhegan Pilot Program. The WMPAAC met for the first time early in March. Two members of each committee were chosen to be on the selection team to hire the PISF/Water Management Plan (WMP) consultant. Both committees' meetings are open to

**FROM THE BEND**, continued on page 2

**INSTREAM FLOW**, continued on page 10

## FROM THE BEND

*continued from page 1*

officials attended the conference. The attendees started the day with a plenary presentation on low impact development followed by a concurrent session with tracks for development strategies, community involvement, watershed assessment tools, and New Hampshire-specific watershed information. The conference proceedings can be viewed at [www.des.nh.gov/rivers/2003Conference/](http://www.des.nh.gov/rivers/2003Conference/). Thank you Coca Cola Bottling of Londonderry, Eastern Mountain Sports, Saco Bound, Borders, Margaritas, Uno Chicago Grill, Connecticut River Joint Commissions, Cold River LAC, Upper Merrimack LAC, Wilma Allen, Dave Neils, Society for Protection of New Hampshire Forests, Christa McAuliffe Planetarium, L.L. Bean, and Stonyfield Farm for contributing items to this year's conference!

Beyond the water quality planning funds DES provides to the Regional Planning Agencies to support LAC management plan activities, this year RMPP staff were also able to help secure funding for the development or implementation of management plans for the Isinglass, Lower Merrimack, and Piscataquog Rivers. The funding for the Lower Merrimack and Piscataquog LACs was provided via Supplemental Environmental Projects negotiated by DES in enforcement actions, while the Isinglass Project resulted from DES discussions with and eventual funding by the Office of Energy and Planning Coastal Zone Program. In 2004, RMPP will continue to seek additional funds to support the LAC efforts to develop and implement management plans.

RMPP staff were designated a seat on the SB87 Study Commission. This commission has a charge of recommending appropriate setbacks for land application of residuals and short paper fiber along designated rivers. The Rivers Management Advisory Committee (see RMAC article, page 3) as well as two Local Advisory Committees representatives also serve on the commission. RMPP staff and the DES Residuals Program look forward to continuing the discussion of potential buffer and setback determination methods for non-grandfathered land application sites along designated rivers. The SB87 Study Commission will issue a final report to the General Court by July 1, 2004.

A major accomplishment in 2003 was the development of road sign MOA with DOT. This effort has been underway intermittently since the RMPP's inception, and thanks to the efforts and cooperation of DOT's William Lambert and Robert Lang, the MOA will enable Local Advisory Committees to apply to DOT to install Protected River Signs at state road bridge crossings. DES will be developing the application process this year with the hope that LACs could start installing signs this fall. Thank you DOT for partnering in this effort to recognize the state's designated rivers!

Regardless of the accomplishments in 2003, the RMPP would not be a program without the dedicated efforts of the Local Advisory Committee members. I feel very fortunate to support those who volunteer their time and energy to protect New Hampshire's designated rivers. This program is truly a state and local partnership, and that partnership only works as well as the LACs' hard work and commitment. With comments submitted on over 40 permit applications, river festivals, monthly meetings, newsletters, land protection efforts, comments on legislation and proposed administrative rules, LAC members are truly dedicated. Thank you Local Advisory Committee members; you are valued stewards of your watersheds!

The RMPP would also like to recognize our former Watershed Planner, Beth Krumrine, for the enthusiasm, commitment, and creativity she brought to the program. During her short tenure with the RMPP, Beth redesigned the RMPP logo, secured the road sign MOA with DOT (the sign is her design as well!), coordinated two River and Watershed Conferences, and provided support to the Connecticut River Joint Commission and its five subcommittees, the Cold River, Ashuelot River, and Swift River LACs. And that is only a sample of what Beth accomplished! Beth was an invaluable resource for the RMPP, and she will be truly missed.

The continued success of the RMPP depends on public support for the program and local involvement among the designated river communities. For more information about the RMPP, please visit [www.des.nh.gov/rivers](http://www.des.nh.gov/rivers). If you live in a community through which a designated river flows, or if you would like to be involved in the activities of a river's LAC, please contact DES Rivers Coordinator Steve Couture at (603) 271-8801 or [scouture@des.state.nh.us](mailto:scouture@des.state.nh.us) for further information.

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# Update From the Rivers Management Advisory Committee

by Ken Kimball, Chairman of the RMAC

The Rivers Management Advisory Committee (RMAC) is the legislatively created statewide committee whose members are governor appointed and represent diverse river interests. The RMAC's principle duties are to review nominations to designate rivers into the River Management and Protection Program (RMPP), to oversee the disposal of state lands within river corridors, and to advise DES regarding the implementation of the RMPP. The committee is composed of 14 members, ten voting and four non-voting. During last year, several voting members' terms ended. New voting members joining the RMAC were James Jones representing the N.H. Fish and Game Commission and Allan Palmer representing the N.H. Business and Industry Association.

The original RMPP legislation created specific safeguards for rivers legislatively designated into the program. One such safeguard concerned setback requirements for septage, biosolids and short paper fibers whose implementation had included a term grandfather clause; the grandfather clause was set to expire in July of 2003. Much controversy surrounded this issue and as a result Senate Bill 87 passed in July of 2003. SB 87 created a study commission to bring recommended resolution on the issue back to the General Court and legislatively extended to grandfather clause to July of 2005. The RMAC was included as a member of the SB 87 created study commission. Municipalities, business and farm interests were concerned that ending the grandfathered clause could be detrimental to river protection, possibly impacting already economically pressed agricultural operations that use these materials as fertilizers. Local River Advisory Committees and conservation interests expressed concerns on poten-



*The historic Rte. 13 bridge over the Souhegan in Milford. DES photo.*

tial increased water pollution, particularly from viruses and other exotic pollutants, and that the local groups who had diligently worked to get their rivers designated were being short-changed by the removal of a protection they had understood was to be part of their designation effort. After much research, including presentations from the USDA-Natural Resources Conservation Service and internal debate, the RMAC put forth its proposal to the SB 87 Study Committee. The RMAC's proposal recommends continuation of some disposal, but with added levels of protection for designated rivers and river segments including required site-specific studies, vegetated buffers with trees and a sunset date for the grandfather clause.

Instream flow rules, a much needed but extremely complicated issue, took another step forward. The General Court stepped in and modified the draft instream flow rules that the RMAC had helped draft over the past decade. The General Court mandated that the rules start with a pilot program for two rivers, the Souhegan and Lamprey, with state funding for the former. Funds have since been received through a federal appropriation

for the Lamprey River thanks to the efforts of U.S. Senator Gregg. By legislation the RMAC was tasked with reviewing nominations and recommending committee members for the Water Management Planning Area Advisory Committee (WMPAAC) and Technical Review

Committee (TRC). The RMAC met this obligation for the Souhegan and those committees are now functional. The RMAC will soon be move forward on nominations for the Lamprey River's TRC and WMPAAC.

No new river nominations or disposal of state lands within river corridors came before the RMAC in the last six months. The RMAC provided comments on the proposed DES wetlands mitigation rules. Specifically, the RMAC recommended that wetlands that are contiguous with rivers and are within designated river corridors receive additional mitigation similar to coastal wetlands because of their important role to river ecosystems. This recommendation was not adopted in the rules.

Unfortunately due to the state fiscal crisis, DES and the RMAC lost the services of Beth Krumrine, who was a watershed planner in the Watershed Management Bureau. As part of her duties, Beth had provided support to the RMAC, Local River Advisory Committees, and the annual state river and watershed conference. The RMAC expresses its thanks for the diligence and efforts Beth put forth to improve the river and watershed resources of the state.



# Contoocook River Offers Much to Learn

*by Marian Baker, Secretary, Contoocook and North Branch Rivers Local Advisory Committee*

I find that one of the most interesting parts of our monthly meetings is hearing news from each town as we introduce ourselves; we have had many new members of our LAC this year. In the process we are all learning more about other parts of the river, and discovering which parts are having to deal with similar problems as the town we each represent.

Jaffrey, the town at the headwaters of the Contoocook, has had a hard time trying to find a source of drinking water for the town, due to limited supplies and possible contamination of those supplies. Meanwhile Concord, at the end of the river, uses our river as an ample backup source of water.

Two exotic species, milfoil and purple loosestrife, have invaded the Powder Mill Pond area between Hancock and Greenfield, a problem shared with Contoocook Lake and the Cheshire Pond areas in Rindge and Jaffrey. All towns along our river are being challenged with incredible numbers of new houses that are popping up like mushrooms across the landscape, especially along the beautiful trout stream tributaries of the river.

As we have begun looking over the ten year old management plan, we were reminded again that each town has some unique issues as well as ones shared by others.

One unique beneficial issue is the planned removal of a dam in Henniker located at the end of the famous Freight Train Rapids. It has been encouraging to hear of the conservation easements in Deering and Bennington. Hillsboro is known for trying to protect its many historic stone arch bridges, but also has had significant development in floodplains.

Hopkinton members have been involved in the permitting process surrounding the proposed Bio Energy plant.

No matter how much we know about our river, there is always a lot more to learn!

At the same time, there is much more work for us to educate our fellow residents about the importance of the river and what effects we have on the river that runs through the

middle of many of our towns! This was reinforced this past week, when I discovered that someone had dumped a large sofa into the river near the entrance to our town's recreation river trail!

What have you learned about the river lately? Join a local advisory committee; you are sure to learn more!

## Ashuelot's Winter Hike a Shoe-in!

*by Barbara Skuly, Chair, Ashuelot River Local Advisory Committee*

The weather of the past two winters has presented the perfect opportunity for the Ashuelot River Local Advisory Committee to traverse the pristine natural segment of the headwaters of the Ashuelot River under ideal conditions. Several members and



*Ashuelot River LAC members Tom Taylor, Pablo Fleischmann, Bohdi Fleischmann, Steve Stepenuck, and Pat Eggleston enjoying the headwaters hike. Photo by David Hoitt, hike participant.*

their families hiked on snowshoes down the middle of the Ashuelot River made passable by the cold and the accumulation of ice and snow. The five-mile segment was divided into two outings to enable us to enjoy the quiet beauty of this still wild area and to pause to observe signs of wildlife.

Our time was well rewarded as we saw tracks and signs of moose, coyote, otter, beaver, fisher, red fox, gray fox, snowshoe hare, and mink. Noted were a few deer rubs, and many bear bites, claw marks and bits of bear fur on balsam firs along the edge of the river. The open expanses of frozen wetlands were stunning, and the otter slides long and frequent. It is truly an untrammelled part of the river providing abundant wildlife habitat worthy of protection.

We encourage others to take the opportunity during the frozen time of year to investigate those areas of their rivers that might be too wet or buggy in the warmer seasons. The snow provides the perfect medium for tracking, the February sun shines its warmth and brightness, and you don't need to swat a single black fly or mosquito!



*Great blue heron takes flight over the still waters of the Contoocook River on a summer's day. Photo by Pat Gruttemeyer, DES.*

# Cold River LAC Completes First Year of Water Quality Characterization Project

by Deborah Hinman, Chair, and  
Mike Heidorn, Cold River Local Advisory  
Committee

The Cold River Local Advisory Committee (LAC) is completing a multi-year water quality characterization project, which includes physical, chemical and biological monitoring of the Cold River, its tributaries and other water resources. The watershed includes the towns of Alstead, Acworth, Walpole, Langdon, Lempster, Charlestown, Marlow and Unity.

The current monitoring program measures: dissolved oxygen, pH, conductivity, temperature, oxidation-reduction potential, turbidity, stream stage, velocity and aquatic insect populations. Initial results suggest that water quality in the Cold River is good to excellent. Over the coming year, project leaders hope to expand the project to include monitoring of nutrients (nitrogen and phosphorous), bacteria, local weather patterns and road salt, as well as to increase communications between local schools, municipal officials, lake associations and landowners on water resource issues.

DES has described the Cold River LAC's project as "outstanding," and teamed up with them to present a discussion about volunteer water quality monitoring at the state's river and watershed conference. Also, the first "Cold River Water Quality Report" ([www.des.nh.gov/wmb/VRAP](http://www.des.nh.gov/wmb/VRAP)) has been released by DES based on last year's volunteer data.

Approximately \$12,000 has been raised by the LAC for the project through grants and cash donations, not including donated services and discounts valued at well over \$20,000. Enthusiastic support has been pro-

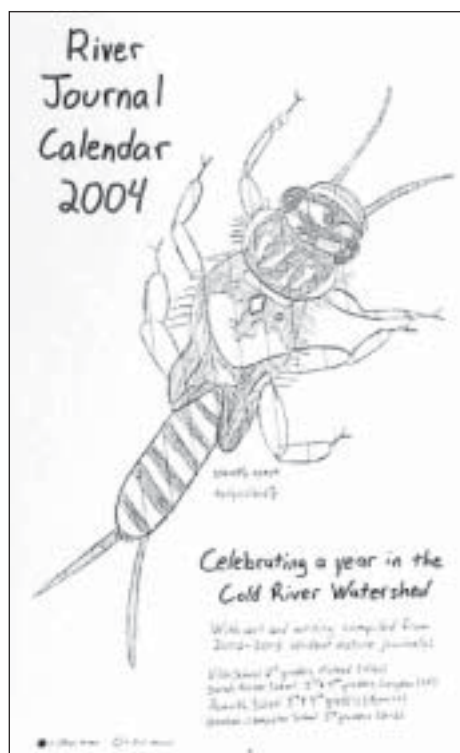
vided by many groups including: Connecticut River Joint Commissions, New England Grassroots Environmental Fund, Fall Mountain Educational Endowment Fund, Fall Mountain Regional School District, local Conservation Commissions, Connecticut River Watershed Council, DES, Upper Valley Lake Sunapee Regional Planning Commission, local landowners, Crescent and Warren Lake Associations, anonymous donors, equipment vendors (InSitu, Forestry Suppliers) and volunteer samplers of all ages.

In addition, the LAC recently donated proceeds (\$900+) from sales of their unique "2004 River Journal Calendar" to the Fall Mt. Educational Endowment Fund to be used for a new small grants program to support local environmental studies in the watershed. The calendar was the result of a

year of weekly lessons on watersheds, water quality, and the natural environment, coordinated with willing teachers across the watershed. The LAC enlisted Travis Hussey, an AmeriCorp member with the N.H. Association of Conservation Districts' Resource Conservation Corps, to work with students each week during the school year. He and the teachers took classes to the river and nearby streams to study macroinvertebrates, helped them keep nature journals, and provided lessons that brought the watershed to life.

On the April page of the River Journal Calendar, for instance, there is a wonderful drawing with the subtitle "a good river doing its job." The drawing is one of hundreds of inspired pencil sketches and notes that grace the calendar – all taken from the nature journals of third, fourth and sixth graders and all reveling in the idea of "a good river doing its job." And what a job! Elsewhere in the calendar, the journal entries explore the vast web of life within their watershed, touch upon water cycles, habitats, tracking, mapping, conservation, and adaptation. Along the way, the students encounter skunks, owls, dragonflies, deer, and a whole host of animal neighbors.

Anyone wishing more information about these Cold River projects should contact Debby Hinman, Chair, at 835-2309 or [dhinman@sover.net](mailto:dhinman@sover.net), or Mike Heidorn, WQM Team Leader, at 835-2328 or [mheidorn@usaexpress.net](mailto:mheidorn@usaexpress.net).



2004 River Journal Calendar; cover artwork by Kaitlyn, an Alstead sixth grader.

## News from the “West Coast” of New Hampshire

by Adair Mulligan, Communications Director, Connecticut River Joint Commissions

This year the Connecticut River Joint Commissions (CRJC) launched a multi-year effort to update our six-volume *Connecticut River Corridor Management Plan*, prepared by CRJC and our five bi-state local river subcommittees – Headwaters, Riverbend, Upper Valley, Mt. Ascutney and Wantastiquet – and published in May 1997. Curious to see what the first plan had achieved, we compiled a six-page, single-spaced list of “Actions to Date.” Who says plans “just sit on shelves”?!

Each of our local subcommittees is an active voice for river issues in its region. In 2003, they provided advice on rehabilitation of the Stratford/Maidstone Bridge, and projects to stabilize riverbanks, expand a major public boat access, conduct highway and rail line repairs, create private access and construct buildings near the river. We welcomed a number of new appointments to the local subcommittees, and now have 77 active local members.

Monthly meetings of the Connecticut River Joint Commissions provide an ongoing discussion on a wide range of topics. In 2003 they ranged from the status of water quality information to the condition of municipal wastewater treatment plants and the implications of glacial lake varve formations for development. CRJC also supported a highly successful conference on stormwater management and low impact development.

Riverbank erosion is one of the most prevalent and misunderstood problems facing the Connecticut River and its tributaries. CRJC won support from EPA and NOAA for a major riverbank restoration at the Fort at No. 4 in Charlestown, a difficult project to safeguard the state's most significant Contact Period archeological site. The design was further challenged by the discovery of the federally endangered Dwarf Wedge mussel just off the eroding bank. We celebrated completion of the project in November with an address by Robert Varney, Regional Administrator, EPA Region 1.

CRJC also successfully applied for a grant from the Upper Connecticut River Mitigation and Enhancement Fund to conduct a fluvial geomorphic assessment of 85 miles of the Connecticut River from Murphy Dam in Pittsburg to the Gilman Dam in Dalton. The project will be completed in October 2004, and will result in an engineering design and cost estimates for restoration of at least one top priority erosion site.

Visit us on the web at [www.crjc.org](http://www.crjc.org), where we now post our newsletter, *River Valley News*, and have added a search



*The Fort's riverbank visitors included EPA Region I Administrator Bob Varney (in the lead). Photo by Adair Mulligan, CRJC.*

feature. Web traffic reports confirm that our riparian buffer and erosion guidance attract visitors to our website. We also developed a major traveling exhibit for public events and workshops, which describes CRJC's program and includes a learning panel on riparian buffers and bank erosion.

Our proudest achievement in 2003 was the publication of *Proud to Live Here*, a 232-page book written by Richard J. Ewald, with Adair Mulligan, and edited by Sharon Francis. The book is an exploration of the rich cultural and natural resources of the Connecticut River Valley of Vermont and New Hampshire, and is illustrated with almost 400 images, including an eight-page full-color insert. CRJC distributed over 1,300 complimentary copies to schools, libraries, historical societies, and officials in the more than 200 towns in the river's upper watershed. Copies are available through CRJC.

For more information on  
The N.H. Rivers Management &  
Protection Program



[www.des.nh.gov/rivers](http://www.des.nh.gov/rivers)



# Isinglass River Local Advisory Committee Celebrates Its First Year!

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*by Liz Evans, Chair, Isinglass River Local Advisory Committee*

The Isinglass River Local Advisory Committee celebrated its first anniversary at the December 2003 monthly meeting. The IRLAC hit the ground running, so to speak, and found itself thrust into a review of wetland and site specific applications filed with DES for sites within our river corridor. In between drafting by-laws, electing officers, and getting to know each other, IRLAC members devoted several meetings, as well as work sessions and site reviews, to review of permit applications associated with a proposal for a major residential

subdivision located near the Isinglass River in Barrington. The development is located in an area of previously unfragmented habitat bordering prime wetlands along a major tributary of the Isinglass, with drainage structures flowing directly into the Isinglass through culverts under Route 126.

The permit review process was a good learning experience for all parties involved, including fledgling LAC members, local land use boards, and developers working in the river corridor. In retrospect, the project was a perfect introduction to the roles and responsibilities of the LAC, as well as a lesson in the issues facing our three ri-

parian communities and, equally important, a lesson in the constraints facing any regional planning effort. Invaluable lessons were learned in the course of this process, which will improve our understanding of the role and importance of planning and development as we work toward a river corridor management plan. We have also had a first-hand chance to realize how lucky we are to have the IRLAC up and running before major developments reached the Isinglass, while we still have a precious and beautiful resource to protect.

Although we have experienced some growing pains, our group has come a long way this first year. We have had preliminary meetings with our riparian communities, and have more sessions scheduled for the coming year. Membership in the LAC is stabilizing, as members work toward the time commitment we will need to get the Isinglass LAC off the ground and to begin work on the management plan. We closed the year with the receipt of our first financial contribution, thanks to LAC member James McCarty, who secured a matching donation from Exxon/Mobil for his volunteer hours devoted to the Isinglass River. Happily, we concluded the year 2003 with the good news that the IRLAC was awarded a grant through the N.H. Coastal Program. The grant will allow us to begin public education and outreach efforts in our three riparian communities during 2004. We anticipate a productive upcoming year, and we are looking forward to the opportunity to work with the public, have some fun, and to get people in our area to really enjoy and appreciate all that the Isinglass River has to offer. Finally, we would like to thank Steve Couture, our Rivers Coordinator, who has guided our group with wit and wisdom through the ups and downs of our first year.

## Partnerships – The Key to Exeter LAC's Success

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*by Theresa Walker, Rockingham Planning Commission*

The Exeter River Local Advisory Committee (ERLAC) partnered with dozens of organizations to pull off the hugely successful Third Annual Exeter River Alewife Festival last May. Over 600 people took advantage of a rare sunny spring day to talk with representatives from diverse groups such as Great Bay Coast Watch, Trout Unlimited, and the American Independence Museum. N.H. Fish and Game provided tours of the fish ladder, giving people an opportunity to see what Alewives, Lamprey and other fish look like. The N.H. Estuaries Project attracted children of all ages with their game "Eel of Fortune," which featured live eels.

Following the Committee's theme of "Discovering the Past, Preserving the Future," ERLAC partnered with environmental organizations, historical societies and arts associations in the watershed to design a program that provided live animals, music, artwork, and a glimpse into historical activity

along the river. These partnerships strengthened ERLAC's ability to increase attendance at the Festival, with the result of increasing public understanding of the vital role the river plays in providing drinking water, wildlife habitat, and recreational opportunities. According to ERLAC Chair Don Clement of Exeter, "The Festival offered something of interest for everyone, be it wildlife, history, viewing artists at work, or kayak racing." New to the Festival program in 2003 was a canoe and kayak race along a four-mile course set in the tidal Squamscott River. Over 40 hardy paddlers raced along, supported by a cheering crowd lined along the riverbank.

ERLAC and partners are already hard at work organizing the 2004 Festival and canoe and kayak race, to be held on June 5 in downtown Exeter. Festival organizers are grateful for the support provided by DES, N.H. Coastal Program, N.H. Estuaries Project, and the Timberland Company. For more information, please contact ERLAC at (603) 778-0885.

# 2004 305(b)/303(d) Surface Water Quality Report

by Gregg Comstock and Ken Edwardson, DES Watershed Management Bureau

## Surface Water Quality Report Available

On April 1, 2004 the DES Watershed Management Bureau announced the completion of the final 2004 Section 305(b) and 303(d) Surface Water Quality Report for New Hampshire. Copies of the report are available at [www.des.nh.gov/wmb/swqa](http://www.des.nh.gov/wmb/swqa).

What is a Section 305(b)/303(d) Report? Every two years, the federal Clean Water Act (CWA) requires states to submit two surface water quality documents to the U.S. Environmental Protection Agency. Section 305(b) of the CWA requires submittal of a report (commonly called the “305(b) Report”) that describes the quality of the surface waters and an analysis of the extent to which all such waters provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water.

The second document is typically called the “303(d) List” because it is required by Section 303(d) of the CWA. The 303(d) list includes all surface waters that:

- are impaired or threatened by a pollutant or pollutant(s),
- are not expected to meet water quality standards even after application of best technology standards for point sources or best management practices for nonpoint sources and,
- require development of comprehensive water quality studies called Total Maximum Daily Load (TMDL) studies.

Only those surface waters that meet all of the above criteria are included on the 303(d) list. Consequently the 303(d) list represents a subset of all impaired or threatened waters; it does not represent the complete list of all surface waters that are impaired or threatened.

The 2004 Section 305(b) and 303(d) Surface Water Quality Report is presented in four volumes. The purpose of Volume 1 is to provide the methodology for making assessments (also known as the Consolidated Assessment and Listing Methodology or CALM) and to provide a summary of the surface water quality assessment results for each of the following five waterbody types: estuaries; impoundments, lakes and ponds; ocean (within State jurisdiction); and rivers and streams.

Volume 2 includes assessment results for each individual surface water or assessment unit (AU). Volume 3 includes

Designated Uses	DES Definition
<b>Aquatic Life</b>	Waters that provide suitable chemical and physical conditions for supporting a balanced, integrated and adaptive community of aquatic organisms.
<b>Fish Consumption</b>	Waters that support fish free from contamination at levels that pose a human health risk to consumers.
<b>Shellfish Consumption (Tidal Waters)</b>	Waters that support a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers.
<b>Drinking Water After Adequate Treatment (Fresh Waters)</b>	Waters that with conventional treatment will be suitable for human intake and meet state/federal drinking water regulations.
<b>Primary Contact Recreation (i.e. swimming)</b>	Waters suitable for recreational uses that require or are likely to result in full body contact and/or incidental ingestion of water.
<b>Secondary Contact Recreation</b>	Waters that support recreational uses that involve minor contact with the water.
<b>Wildlife</b>	Waters that provide suitable physical and chemical conditions in the water and the riparian corridor to support wildlife as well as aquatic life.

the Section 303(d) List and Volume 4 includes information on the nonpoint source program and the costs and benefits of pollution control efforts. Prior to reviewing assessment results, all readers are encouraged to review the CALM as it defines assessment terms and explains how assessment decisions were made; consequently it will help one to better understand and interpret assessment results.

## How Water Quality Assessments are Conducted

How do we determine if a waterbody is healthy (i.e. fully supporting), impaired (i.e., not supporting), threatened, or if there is insufficient information to make an assessment? Answers to these questions and many more questions may be found in the Consolidated Assessment and Listing Methodology, or CALM, which is available at [www.des.nh.gov/WMB/swqa/2004/pdf/CALM.pdf](http://www.des.nh.gov/WMB/swqa/2004/pdf/CALM.pdf).

In general, the process begins with the State's surface water quality standards, which include the designated uses of the surface water and the criteria (i.e., maximum pollutant concentrations) designed to protect the uses. Water quality standards for New Hampshire are included in RSA 485-A:8 and Env-Ws 1700. Designated uses for New Hampshire surface waters are shown in the table above. One of the primary goals of the Section 305(b) / 303(d) Water Quality Report is to assess all surface waters for all designated uses.

Consistent with the water quality standards, additional assessment rules must then be developed to address questions such as:



- What parameters do I need to sample for to determine if a particular designated use is meeting standards?
- How many samples do I need to make an assessment?
- How old can the data be?
- When must samples be collected?
- What do I need for quality assurance and control?

Once again, answers to these and similar type questions may be found in the CALM for each designated use. With the assessment rules in place it is then necessary to develop a procedure to track and report assessment results. In 2002, such a system was developed which revolves around what is called an assessment unit.

### Assessment Units

Assessment units (AU) are the basic unit of record for conducting and reporting water quality assessments. In 2002, all surface waters in New Hampshire were subdivided into approximately 5,100 smaller segments or AUs. The system is based on 1:100,000 scale hydrography that is linked to the National Hydrography Dataset (NHD), the national coverage used by EPA. In the future, DES intends to move to higher resolution (1:24,000 scale) hydrography, which will result in even more accurate assessments.

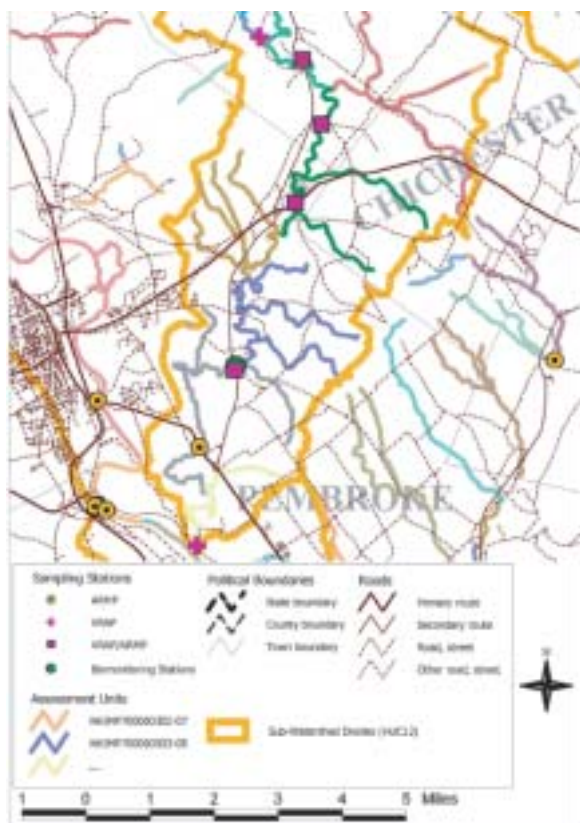
Criteria for determining where one AU should begin and another should end are included in the CALM. In general, however, the intent was to create AUs that are homogenous so that any sample taken within the AU could be assumed to be representative of the AU and, therefore, used to assess the AU. An example showing typical assessment unit and sampling station coverage in a HUC-12 watershed is provided in Figure 1.

To keep track of all the assessment information associated with a particular AU, each AU was assigned a unique identification number or AUID (e.g., NHIMP700060302-07). The AUID is extremely important as it is the key to finding assessment status.

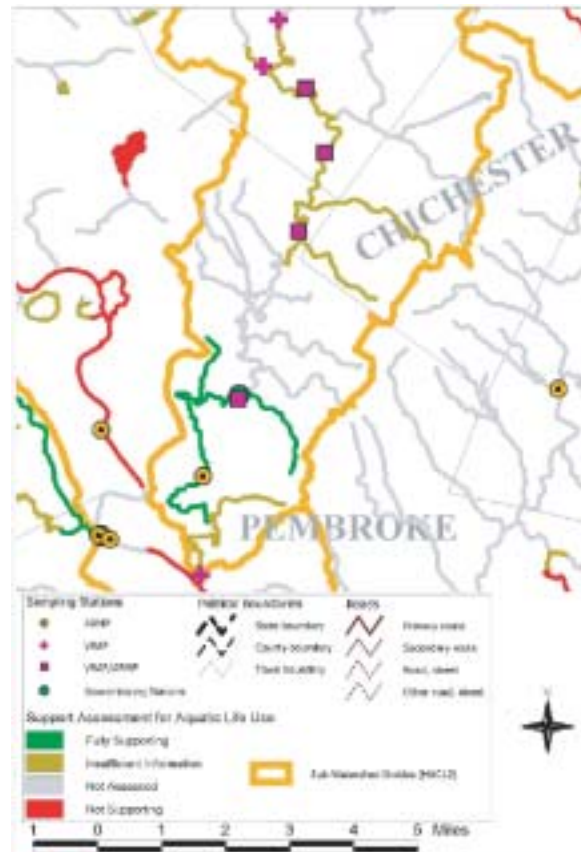
That is, in order to find the assessment results for any waterbody, it is necessary to know its AUID. Several methods are provided at [www.des.nh.gov/wmb/swqa/2004/default.asp?go=aboutAUs](http://www.des.nh.gov/wmb/swqa/2004/default.asp?go=aboutAUs) to facilitate finding AUIDs for any waterbody of interest.

### How You Can Help Improve The Assessments

Aquatic life use assessment results are shown in Figure 2 for the same watershed presented in Figure 1. Figure 2 illustrates that there are some AUs which could not be assessed for aquatic life due to insufficient information. This



**Figure 1.** 2004 assessment units and water quality sampling stations in the lower Soucook River watershed.



**Figure 2.** Aquatic Life Use assessments results for the lower Soucook River watershed.

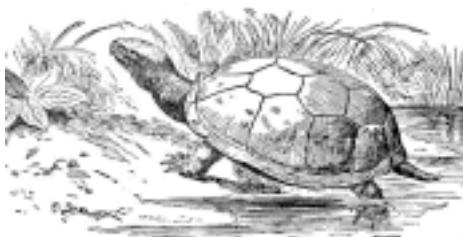
## SURFACE WATER QUALITY REPORT

*continued from previous page*

is typical throughout the State not only for aquatic life but for other designated uses as well. Considering the fact that there are approximately 5,100 AUs statewide, it's not surprising that data gaps exist.

So how can you help? The answer is, help us fill in the data gaps so that we can assess more of New Hampshire's surface waters. One way is to submit any surface water data you have to the DES Watershed Management Bureau along with quality assurance/quality control information. If it is of adequate quality, we can and will use it in our assessments. Information on how to submit data is available at [www.des.nh.gov/wmb/swqa](http://www.des.nh.gov/wmb/swqa).

Another way is to join or start up a volunteer monitoring group. Through the Volunteer River Assessment Program (VRAP), DES has successfully assisted volunteer monitoring groups, such as the Cold River LAC, to develop a monitoring program that not only achieves their objectives but also provides data for 305(b)/303(d) assessment purposes. For information on the VRAP program, contact Ted Walsh at (603) 271-2083 or by email at [twalsh@des.state.nh.us](mailto:twalsh@des.state.nh.us).



## INSTREAM FLOW

*continued from page 1*

the public and provide DES with direction, feedback, and information towards develop the PISF and the WMP.

In December 2003, DES issued a request for qualifications asking for qualifications and experience information from consulting firms interested in conducting the PISF assessments and developing the water management plan for the Souhegan pilot. By the January deadline, eight firms had submitted packages. In March, DES, with assistance from the advisory committees, selected the most qualified consulting firms for further consideration. DES asked these firms to develop proposals and to be interviewed by the selection team. The firm that is ultimately selected will use the \$355,000 to determine the PISF and develop the WMP.

Each PISF study will require focused scrutiny of detailed data. Information about biology, industry, water supply, agriculture, societal concerns, hydrology and other factors will all be collected and incorporated into the decision making process. The consultant will study the river to identify the entities needing protection and the flows that will enable them to be protected. The committees will help evaluate the processes and the results. DES's Instream Flow Rules identify what is to be protected and how the process of determining the PISF will happen. These rules and river-specific information about the Souhegan and Lamprey can be found on the Instream Flow website at ([www.des.nh.gov/rivers/instream/](http://www.des.nh.gov/rivers/instream/)). The proposed PISF will be presented to the public for comments. When the final revisions have been made, including the public comments, DES will establish the PISF for the river.

The WMP will look at three main

areas of water management for maintaining the PISF: conservation, water use, and dam operations. These three areas of water management will be combined to form the WMP. The consultant will identify specific methods to reduce water use to address conservation. The consultant will identify and evaluate water distribution and storage options to develop the water use component of the WMP. Finally, the evaluation of storage and release of water from behind dam impoundments will result in the dam operations component of the WMP.

A variety of alternatives for conservation, water use, and dam operations will include a cost and feasibility for each option, be collected, and reviewed. The consultant will then make a proposed water management plan that keeps the PISF by selecting the most effective and least intrusive alternatives. The committees will review and comment on the available alternatives more than once before the proposed WMP goes before the public. After the WMP is presented to the public for comment, the proposed WMP will be revised and DES will adopt and begin implementation of the WMP.

The Instream Flow Program has taken many years to reach this point. The pilot program exists because of the cooperation of many people with differing interests who all saw the value of protecting New Hampshire rivers. The completed pilot program for these two rivers will serve as a guideline for the protection of other rivers in the future. Processes that worked well will be continued and those that did not will be revised or scrapped. Continued progress requires good science and fair decision-making that will protect and maintain the rivers' many uses and characteristics. The result will be functioning rivers that meet the varied needs of New Hampshire.

## Around and About the Lamprey River – The LRAC in 2003

*by Judith Spang, Chair Lamprey River Advisory Committee, and Margaret Watkins, N.H. Director, National Park Service Rivers and Trails Program*

The Lamprey River Advisory Committee (LRAC) had another productive year in the schools, on the river, on the land, and through a myriad of meetings. The LRAC's Lamprey River Curriculum continues to be popular in watershed schools, with eight classes using it in 2003. Progress was made on David Allan's children's book about two native American boys summering along the Lamprey in colonial times, which the LRAC will publish in 2004 to complement the river curriculum.

A spring canoe trip in the lower reaches of the river allowed members and the public an all-too-infrequent opportunity to enjoy the river we are working to protect. Ornithologist George Gavutis of Kensington pointed out birds and other features along the way. We stopped at a large conservation property that the LRAC helped to protect and discussed potential wetland restoration projects on it.

The Lamprey River Watershed Association, with whom the LRAC works closely, again monitored water quality from Epping east. The river is remarkably clean.

Land conservation projects completed in 2003 include a 50-acre easement on land straddling Lee and Durham with 1,659 feet of river frontage, a 27-acre property purchased by the Rockingham Land Trust in Epping with 2,700 feet of river frontage, and a 162-acre parcel in Newmarket that includes portions of a remarkably pro-

## Lower Merrimack River LAC Report

*by George May, Secretary, Lower Merrimack River Advisory Committee*

The Lower Merrimack River Local Advisory Committee (LMRLAC) under the insightful guidance of longtime Chairman Stan Kozlauskas and our Nashua Regional Planning Commission staff, Angie Rapp, met monthly to focus on the Lower Merrimack. Thankfully, LMRLAC welcomed several new members from Hudson, Litchfield and Nashua in 2004 and centered this new found energy on monitoring, management plan development, outreach, and community involvement.

LMRLAC again conducted water quality monitoring every other week from June through September. And again this monitoring showed that the river continues to clean up and what was one of the ten dirtiest rivers in the United States 30 years ago, before the Clean Water Act, is now relatively free of bacteria. We have been concerned, however, with foam and bubbles that appear to be coming from the Manchester airport and hope to get that corrected. We also have creosote continuing to leach into the river past structural barriers from the former Koppers plant in Nashua. Naturally the 26 combined sewer overflows (CSOs) in Manchester and nine in Nashua severely increase the bacteria load after heavy rains.



*Combined sewer overflow outlet on Old Maid Brook in Nashua. Photo by Steve Landry, DES staff.*

These communities, along with the three Massachusetts CSO communities, are working with the U.S. Army Corps of Engineers and the U.S. EPA to prevent CSO sewage from getting into the river. Nashua is planning to construct several large storage tanks to collect the runoff until the wastewater treatment plant can gradually treat it. Improvements to the water quality of the Lower Merrimack continues.

The Lower Merrimack is one of the original rivers in the RMPP and so has a management plan that needs to be updated, and those plans are in the works through funding provided by an enforcement action for a water quality violation affecting the Lower Merrimack River. LMRLAC and the Nashua Regional Planning Commission intend to take full advantage of this opportunity to create a vision for the Lower Merrimack River Corridor that reflects the values of its communities.

In 2004, LMRLAC is planning to create a portable display that can be moved to various locations in the watershed to get our message of preserving and restoring the river out to the public. Presently, we have a website at [www.nashuarpc.org/envplanning/lmrlac.htm](http://www.nashuarpc.org/envplanning/lmrlac.htm), which also serves as a communication venue.

LMRLAC has been very active in its communities. We have asked that communities provide buffers allow for public trails along the river. We have also commented on and supported improvements to Depot Street Access in Merrimack and look forward to seeing those implemented this spring. LMRLAC also followed and supported the creation of the Pennichuck Watershed Council as an important spokesman for the Pennichuck watershed. Pennichuck Brook is an important tributary and the water supply for the City of Nashua.

**LAMPREY**, continued on page 12



## One Initiative Leads to Another on the Piscataquog River

*by Dick Ludders, Acting Chair, Piscataquog River Local Advisory Committee*

The Piscataquog River Local Advisory Committee (PRLAC) undertook to plan a river clean-up in 2003. The focus this time was a section of the former B&M Railroad right-of-way immediately adjacent to the river in the south end of Goffstown. Because of easy access to the old rail bed literally tons of garbage had been dumped along it over the years. The PRLAC tapped into a wealth of local volunteerism in the form of the Goffstown Greenway Project, a group working to secure the former rail bed as a Rails-to-Trails initiative. Over 40 people showed up on October 4 and left the trail spotless, as well as clear of encroaching brush.

The collaboration on the clean-up brought the Greenway objective to the attention of the PRLAC. The acquisition of the Goffstown section of the rail bed would allow it to con-



*Clean-up participants proudly stand with their "trophy" catch!  
Photo by Ron Johnson, Vice-Chair, PRLAC.*

nect with the Manchester section now undergoing construction as a trail. The PRLAC has volunteered to help organize a planning charrette in May 2004 using \$3,000 provided to the PRLAC via a DES enforcement action. It will be exciting to see if the trash clean-up initiative leads to a successful trail initiative.

## A Look Back at the Swift River LAC in 2003

*by Joshua Knox, Swift River Local Advisory Committee*

The Swift River Local Advisory Committee (SRLAC) is pleased to report that the year 2003 was a rousing success. This year saw a new member join the SRLAC: we would like to welcome Joshua Knox to the Committee. This year also saw our involvement in three major projects.

The flagship event of the SRLAC, as always, was the Swift River Cleanup, held this year on September 27. The 2003 cleanup was the ninth annual and was a rousing success, drawing visitors from out of state – one participant happened to be visiting from Kalamazoo, Michigan! We hope this year's tenth annual cleanup will be an event to remember as the Swift River Cleanup enters its second decade.

The SRLAC offered input on the Kancamagus Highway (Route 112) upgrade project. The project as proposed would add bike lanes to a section of the Kancamagus Highway, make substantial changes to the Rocky Gorge area parking lot, and mitigate the danger at the "Deadman's curve" section of the highway. The SRLAC is proud to have offered input and special thanks must be given to member Frank Wolfe for his dedication to this effort.

The Committee is also working on a project with the consultants at Provan and Lorber to correct the course of the Swift River as it approaches the Conway Scenic Railroad trestle. Over the past 50 years, the river has moved in its bed to such a degree that its course has begun to change and cause significant problems of erosion. Our aim is to restore the river to its original meander and sinuosity, and we will keep you posted in 2004!

## LAMPREY

*continued from page 11*

ductive wetland in the Lamprey corridor known as Tuttle Swamp. All told, the LRAC has helped to protect some 1,437 acres of land and six miles of river frontage.

The LRAC's advisory role on bridge projects at Rte. 87 and Mill Street in Epping and at Packers Falls in Durham consumed time but are producing in better projects. The LRAC also commented constructively on a major subdivision in Epping and participated regularly in meetings with resource agencies on creating fish passage at the Wiswall Dam. Fish passage analysis by the U.S. Army Corps of Engineers is winding down, and recommendations will be forwarded to the Durham Town Council for final action. Stay tuned next year for the outcome.

## A Focus of Activity in 2003: Souhegan River LAC

by George May, Chair, Souhegan River  
Local Advisory Committee

The most significant news for the Souhegan River this year is the upcoming Instream Flow Study that will ultimately affect all the rivers in the state. The Souhegan River was chosen by DES and the General Court as a pilot project for a study that will be reported back to the legislature. This is a part of the Rivers Management and Protection Program that has never been implemented in the 15 years since it was adopted. A couple of unsuccessful forays into recommendations for instream flows have been attempted in the past, but this is the beginning of what was promised to protect rivers under RSA 483. The Souhegan River Local Advisory Committee (SoRLAC) will be involved with and continue to follow this pilot process closely to ensure the resources and characteristics for which the river was designated are protected and maintained.

The Nashua Regional Planning Commission received a DES Watershed Restoration grant to help SoRLAC develop a river corridor and watershed management plan and work is underway for this significant project. RSA 483 authorizes this plan to be adopted by the river communi-

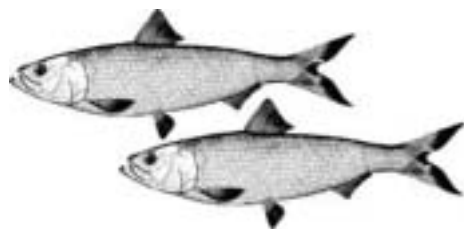
ties as part their management plans, and we look forward to developing a plan that reflects the sentiments of our communities to take advantage of this opportunity. This project will have a kick off through a “state of the watershed” meeting this spring.

It is hard to believe how many projects along the Souhegan are being planned and have to be reviewed by SoRLAC. We have made some suggestions that have improved the health of the river but are concerned by the number of developers seeking to gain approvals without thorough documentation of the potential environmental impacts. This includes a proposal to stabilize a section of riverbank and prevent the natural meandering of the river’s course.

SoRLAC continues to work closely with the Souhegan Watershed Association (SWA), who first proposed our nomination, and the three canoe trips sponsored by the Merrimack River Watershed Council and SWA. We also work with SWA in biweekly summer water quality monitoring along the entire length of the river and with participation in the Adopt a Salmon Family program for local watershed schools where children raise salmon in their classrooms and then release them into the Souhegan in the spring.

Other watershed partners include the Purgatory Brook Watershed Association. SoRLAC was heartened by its recent formation and its efforts to acquire land along this major tributary of the Souhegan River.

As always the time and expertise provided by staff Angie Rapp from the Nashua Regional Planning Commission and Steve Couture, our Rivers Coordinator, is greatly appreciated.

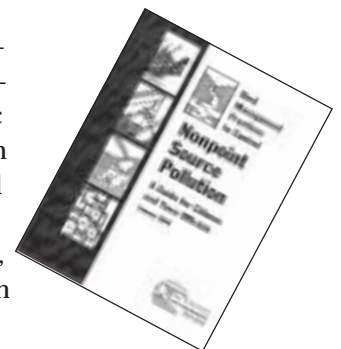


## New Edition of Water Pollution Prevention Guide Available

by Barbara McMillan, DES Watershed  
Management Bureau

The DES Watershed Assistance Section recently released the newest edition of *Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials*. The free guide provides valuable information to town officials, volunteers, business managers and others on the causes of water pollution, how they can help improve the state’s water quality, and what laws protect our waters.

Although there have been great advances in reducing pollution from industrial discharges and sewage treatment plants in the last 25 years, about half the water quality problems nationwide are now associated with nonpoint source (NPS) pollution. Characterized as polluted runoff from the land, NPS pollution can include toxic fluids from the normal use of cars and trucks, soil erosion from construction sites, or fertilizers from farms and backyards.



For free copies, contact Barbara McMillan, DES Watershed Outreach Coordinator, at (603) 271-7889 or [bmcmillan@des.state.nh.us](mailto:bmcmillan@des.state.nh.us).

# Upper Merrimack's Successes and Recognitions in 2003

by Michele Tremblay, Chair, Upper Merrimack Local Advisory Committee

This year, the Upper Merrimack River Local Advisory Committee (UMRLAC) welcomes its newest Adopt-a-River Sponsor, Aquarian Analytical Laboratories, Inc., bringing the UMRLAC's sponsorship program to 100 percent. Aquarian joins existing sponsors: Aries Engineering, Inc.; Checkmate Expert Payroll Services, Concord; Elektrisola, Boscawen; Franklin Savings Bank; Franklin Wastewater Treatment Facility; Public Service Company of NH Corporate Offices and Merrimack Station; and Watts Regulator, Franklin. Many thanks to the conservation commissions and municipalities of Boscawen, Bow, Canterbury, Concord, Franklin, and Northfield for their ongoing support and graciously hosting UMRLAC meetings. The Committee is grateful for its sponsors' and municipalities' support of the Upper Merrimack Monitoring Program (UMMP) and other projects in the watershed.

Bug Nights entered its eighth year in 2003. Over 40 individuals volunteered their "bug identification" services over the winter. Bug Nights was graciously hosted again this year by St. Paul's School in Concord and recognized with a presentation of a commemorative framed print to staffer, Scott Reynolds. Over the summer, the UMMP sent one-third of its volunteer-processed samples to a professional laboratory to compare volunteer-produced data with that from the professional entomologists. Preliminary analysis indicates that the UMMP volunteers' work is of the highest quality. The Central New Hampshire Regional Planning Commission produced a large-format, colored map illustrating UMMP water quality data from its monitoring sites from Franklin to Bow including the Merrimack,



*Michele Tremblay, shown here examining the contents of a kick net, was recognized with a National River Hero award in May 2003 in Washington, D.C. — the only volunteer out of five award winners. Michele said, "This success is shared with all of the representatives of UMRLAC."*

Pemigewasset, Winnepesaukee, and Contoocook Rivers.

The UMMP's water quality data led DES to investigate discharges into the river in Franklin. This helped DES identify sewage discharges into the Winnepesaukee and Pemigewasset Rivers, which both flow into the Merrimack. One discharge has been eliminated, the other is in process.

UMMP plans for 2004-2005 include commissioning a ten-year data report and retrospective of the program. To help fund the report, the UMRLAC has printed T-shirts and tote bags sporting the popular *Insect Inquirer* on the back and a colored dragonfly and river image on the front. Please contact Michele Tremblay (information at the end of this report) or your UMRLAC municipal representative if you would like to make a bold fashion statement with a shirt or bag.

In collaboration with the NH Rivers Council, the UMRLAC facilitated a stakeholder group that reviewed the PSNH re-licensing application and drafted comments for the Federal Energy Regulatory Commission (FERC).

Several meetings were held and groups from Nashua to Franklin participated. The UMRLAC hosted representatives from PSNH and American Rivers so that the Committee could learn more about the FERC re-licensing process. As part of its continued professional development program, Raymond Town Planner Chuck Grassie presented on open space development options.

Michele Tremblay was appointed to serve on the state Senate Bill 87 Legislative Study Commission representing the Connecticut, Pemigewasset, and Upper Merrimack Rivers. UMRLAC also submitted written and oral testimony on House Bill 25 relative to the state's instream flow proposal. The Committee provided comment on the proposed state wetland rules. The UMRLAC conducted an inventory of its management plan for DES.

The UMRLAC continued to review project plans and proposals for state and local projects. The UMRLAC exhibited its interactive display at Concord's River Jamboree and the state's Rivers and Watershed Conference (at which it also presented a training session on volunteer recruitment), conducted a river ecology training at the Loudon Public Library, a presentation to the City of Franklin, and delivered the keynote address at the Green Mountain Conservation Group's annual watershed event. The UMRLAC chair was recognized with a National River Hero award in May 2003 in Washington — the only volunteer out of five award winners. This success is shared with all of the representatives of UMRLAC.

For further information, visit [www.merrimackriver.org](http://www.merrimackriver.org) or contact Michele Tremblay at (603) 796-2615 or [mtrembla@tds.net](mailto:mtrembla@tds.net).



# Protect Your *River* by Monitoring *Lakes* and *Ponds*

## Join the *Volunteer Lake Assessment Program*

by Andrea LaMoreaux and Steve Couture,  
DES Watershed Management Bureau

**I**s there a lake, pond or impoundment within your designated river corridor or watershed? Would you like to know how healthy that lake/pond



*Secchi-man,  
VLAP's superhero.*

is, and what you can do to further protect it and your designated river? If you answered "yes" to these questions, then you may be interested in joining

the DES Volunteer Lake Assessment Program (VLAP).

VLAP was initiated in 1985 in response to an expressed desire of lake associations to be involved in lake protection and watershed management. VLAP is a cooperative program between watershed residents and the DES Watershed Management Bureau. VLAP encourages individuals and watershed associations to play an active

role in monitoring and protecting the beauty and value of the lake or pond that they live near. By sampling the lake several times each year over a period of years, volunteer monitors help to develop a comprehensive data set from which long-term water quality trends can be discerned.

Routine volunteer monitoring results in early detection of water quality changes, allowing DES to trace potential problems to their source before the lake, pond and/or river is severely impacted. In addition, monitoring data is used in the state's report to the Environmental Protection Agency for incorporation into the report to Congress, which assesses the quality of the nation's waters.

### Importance of Volunteer Monitoring

The VLAP volunteer monitors have been, and will continue to be, a key element in protecting the integrity of New Hampshire's waterbodies. Volunteer monitoring leads to local awareness of land use and human practices that may be detrimental to lake quality and also empowers communities in their decision-making regarding lake management issues. Pollution prevention through routine volunteer monitoring ultimately saves the community and the state the cost of expensive, after-the-fact remediation. Maintaining clean water and quality lake resources benefits all of us.

### Please Join!

No matter what your interest in VLAP, whether it is to improve community planning decisions, to do your part in protecting the local environment, or to protect your own investment in property adjacent to the lake or river, please join our program to



*VLAP volunteers Don Flemming and Geoff Molina with Secchi disk on Island Pond in Stoddard.*



*VLAP volunteers Dottie and Paul Provost water-sampling on Upper Suncook Lake.*

help keep New Hampshire's waterbodies healthy and clean. There is still time to join before the 2004 sampling season! For more information or to set up a training visit to your lake or pond, please contact Andrea LaMoreaux, VLAP Coordinator at (603) 271-2658 or [alamoreaux@des.state.nh.us](mailto:alamoreaux@des.state.nh.us). To find out more information on the VLAP program, visit [www.des.nh.gov/wmb/vlap](http://www.des.nh.gov/wmb/vlap).



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## Exotic Aquatic Plants: They're Not Just a Lake Problem Anymore

*by Amy Smagula, DES Watershed Management Bureau*

**Y**es, unfortunately the problem of exotic aquatic plants, like milfoil, is not restricted to the quiet waters of lakes and ponds in New Hampshire. Many river systems, including the Contoocook, Ashuelot, Winnepesaukee, Suncook and Connecticut, among others, are impacted by exotic aquatic plants.

Though these invasive species do not thrive in the faster flowing waters, backwaters and impoundments are subject to dense growth of these plants. The slower flowing waters and rich organic sediments do provide good habitat for milfoil, fanwort, water chestnut, and other exotic aquatic plants.

Today, 60 waterbodies are infested with exotic aquatic plants, and nine of these sites are rivers. Any river with backwater areas or impoundments that has a lake or pond upstream that is infested with an exotic aquatic plant is at risk.

Here are a few tips for helping to protect your river from exotics:

- Know your watershed. Upstream lakes and ponds that are infested can send fragments downstream, easily infesting larger river systems.

- Establish a Weed Watcher Program on your river. Weed Watchers are trained by the coordinator of the Exotic Species Program at DES to identify those plants that are invasive in our surface waters, and those that are native and good for the river system.

- Make sure that access sites to your river are posted with signs from DES warning of infestations of exotic aquatic plants if they do exist, or signs that say the waterbody is free of invasives. Both signs direct boaters how to clean their boats to remove plants before and after using the waterbody.

- If you *do* find an infestation of exotic aquatic plants, contact the Exotic Species Coordinator (271-2248 or [asmagula@des.state.nh.us](mailto:asmagula@des.state.nh.us)) as soon as possible so that we can come to the site, assess the situation, and take appropriate remedial measures. Exotic aquatic plant infestations cannot be eradicated once fully established, but small patches can be removed by diving and hand-pulling the plants.

- Visit the DES Exotics Species Program website for more information at [www.des.nh.gov/wmb/exoticspecies](http://www.des.nh.gov/wmb/exoticspecies).